

What's in the Can? Waste Audit

Objective

Students will be able to:

- ➔ identify the major waste components of school/site;
- ➔ introduce the idea of where waste goes when it leaves the school/site;
- ➔ have an understanding of the quantity of waste and recyclables, and
- ➔ investigate options on how waste may be reduced.

Method

Students will track waste for one day and collect information that will help determine where most of the school's waste is generated. This will allow students to think about how to reduce the amount of waste produced.

Materials

- large protective floor covering
- two large collection containers (clear large storage box or trash cans)
- trash bags
- gloves for each student
- scale (may be typical bathroom scale) and ample space for sorting.

Time

45 minutes – 1 hour to plan and several sessions to conduct audit



Vocabulary

- | | |
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| • audit | • trash |
| • behavior change | • volume |
| • recyclable | • waste |
| • recycle | • weight |

Background

Procedure

1. Lead a discussion with the students to address what an audit is and its purpose. An audit is an accounting and analysis process and may involve counting, weighing and/or observing.
2. Ask students to identify areas where they think waste is generated at school/site cafeteria, office, classroom, etc. For purposes of this audit, waste from the bathroom and "wet waste" from the cafeteria (for example, food or wet paper products) should not be included, but list it as a place where waste is generated.
3. Discuss planning how to conduct the waste audit. This plan may take several days to implement as you will need approval and assistance from administration and staff if you decide to audit areas outside classroom. The more knowledgeable the students and

support staff are the better the project may be implemented.

4. Have students agree upon a representative sample of waste from school/site. The larger the sample, the more accurate your results will be, but a classroom may be a good place to start. Ask students how they will coordinate the waste audit plan and involve custodial service, food service staff (if including food waste), office personnel, and classrooms. Have students think about the most effective way to present the idea such as: visiting individual classrooms, creating and distributing flyers, speaking to a student assembly.
5. Once the sample is selected and the plan created, divide students into teams for collection, sorting, weighing, and analysis. Ask students to devise a plan to keep track of each location where waste is collected. Ask students to devise a plan for disposing of the waste once the audit is finished.
6. Collect samples at the end of the day and analyze it the next. See note below regarding “wet waste” or cafeteria. Copy and pass out the “Statistics” spreadsheet. Or you may want to develop and design an audit specific for the project.
7. Ask the collection team to collect trash from pre-designated locations, keeping record of the location where each sample was collected. Ask weighing team to weigh the empty cans first and record the weight on the appropriate spreadsheet.
8. Ask students to spread the protective covering on the floor and (wearing gloves) empty the contents of the waste container. Ask the students to separate waste into categories: paper, aluminum cans, glass, plastic, and “other” waste. Other waste is used paper from the kitchen, facial tissue, candy wrappers, and anything that does not fit into the other categories. Do NOT include bathroom waste or “wet waste” in your audit. Consider photographing the mounds of separated trash. Pictures are a powerful tool that can be used when sharing the results with the rest of the student body and staff. If the school/site recycles, repeat step 8 and document contents of the recycling container.
9. Once all results are recorded, ask students to dispose of waste according to their previously developed plan in step 5.
10. Copy and pass out “Waste Audit Questions” student page. Use these questions to lead a discussion about what could/should be done to reduce the waste. Talk about advantages

and disadvantages to a recycling or compost program. You may assign students to take the sheet home for further consideration and continue discussion on a second day. Reflection on what was observed may assist students in Enrichment activities. Discuss options of where items could go (i.e., recycle). Discuss what was not audited (e.g., cafeteria – what might they find in “wet waste”).

Assessments

- ➔ Have students prepare posters and graphs to hang near trash or recycling containers showing audit results.
- ➔ Students write a report on what was learned.

Technology Connections

- Document process using camera
- Use presentation and data management software

Enrichment

- ➔ Conduct additional waste audits monthly, quarterly, or semi-annually to monitor the progress in the school’s waste reduction. Document if there is a reduction in waste hauling services and report the savings or explain how those savings offset recycling.
- ➔ Ask the students to speak to other students or an assembly of the student body and staff.
- ➔ Develop messages to encourage source reduction and recycling, consider using lessons “Advertise Our Attitudes” and “Logos and Slogans.”
- ➔ Conduct “wet waste” audit from cafeteria. Weigh the can, subtract the weight of the *empty* can and record this weight. This should be done soon after lunch or right after school, the same day the “wet waste” is collected.

*Created by Keep Pennsylvania Beautiful,
www.keeppabeautiful.org.*

Waste Audit Questions

1. Make a list of items found. Rank in order of highest number found. Chart whether item found could be recycled, reused, or composted.
2. How much of the weight comes from packaging materials? What are some reasons for this packaging? Can you think of some alternatives to this kind of packaging?
3. What strategies can be used by students, educators and administrators to change behaviors and reduce waste? (See glossary of definitions)

Commitment:

Social Diffusion:

Prompts:

Norms:

Communication:

Incentives:

Technology and Structural Changes:
4. What can you do to personally reduce the amount of waste at your school/site?
5. What can you do to teach others about where to put these items?

Waste Audit Statistics

Use this form or create your own. You might choose to audit just one grade or 2-3 classrooms. Reference if you use weight or volume.

Waste from:	Paper	Aluminum Cans	Glass	Plastic	Other Waste	Optional
Classroom						
Classroom						
Classroom						
Administrative Offices (if approved)						
Cafeteria (exclude wet waste)						
TOTAL WEIGHT (lbs) or VOLUME						